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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,712	06/14/2005	Matthias Meyer	72.101	2404

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EXAMINER	
BAISA, JOSELITO SASIS	

ART UNIT	PAPER NUMBER
2832	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/540,712	MEYER, MATTHIAS	
	Examiner	Art Unit	
	Joselito Baisa	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 6/14/2005 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 6/14/2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 9-11, 14 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gehrmann et al. [6441353].

Gehrmann discloses a converter device for converting the electrical current frequency and comprising a housing that surrounds the converter device, the housing comprising:

a converter receptacle **43** that surrounds a board chamber **26** for the converter device,

a housing segment **12** that is connected to the converter receptacle **43** and that acts as a cooling area inside which there are situated cooling air ducts **50** and a fan **47** that is suitable for conveying cooling air through the cooling air ducts, and

in the cooling area ,an external first annular profile **12** and additional annular profiles **13** that are oriented to one another in relation to the axis of the first annular profile **12** in such a way that the annular profiles surround each other with a distance from one another, transverse to a main axial direction, so as to form at least two annular chambers **50** that act as cooling air ducts.

wherein the annular profiles **13** situated inside the first annular profile **12** end with an axial spacing from the separating wall **15** of the converter receptacle **43** so as to form an air deflection area that acts as a cooling air duct [Col. 4, Lines 21-33, Figure 1].

Regarding claim 2, Gehrmann discloses cooling area **12** has a transformer chamber adjacent to the cooling air ducts **50**, for accommodating an isolating transformer for producing an output voltage that differs from a line voltage [Col. 6, Lines 20, Figure 4].

Regarding claim 3, Gehrmann discloses a converter receptacle **43** and the cooling area **12** are coupled with one another thermally by a separating wall **15** [Col. 6, Lines 7, Figure 4].

Regarding claim 4, Gehrmann discloses fan **47** is situated inside the first annular profile **12** coaxial thereto, in such a way that it is suited to suction a cooling air stream via one of the annular chambers **50** and to guide this air stream past at least a part of the separating wall **15** in the air deflection area, and to expel the air stream via a different annular chamber according to the counter flow principle [Col. 6, Lines 1-20, Figure 4].

Regarding claim 5, Gehrmann discloses a fan **47** is situated in the air deflection area [Col. 6, Lines 1-4, Figure 4].

Regarding claim 6, Gehrmann discloses adjacent to the first annular profile **12** there is situated a second annular profile **13** that surrounds an annular transformer chamber that is limited inwardly by a third annular profile **9** [Col. 4, Lines 21-27, Figure 1].

Regarding claim 9, Gehrmann discloses the outer, first annular profile **12** engages with the adjacent annular profile **43** according to the tongue-groove principle [see Figure 4].

Regarding claim 10, Gehrmann discloses the transformer chamber can be closed in the axial direction by annular covers that extend between the outer limitation, by the second annular profile **13**, and the inner limitation, by the third annular profile **9**, of the transformer chamber [Col. 4, Lines 21-27, Figure 1].

Regarding claim 11, Gehrmann discloses the transformer chamber contains a toroidal core transformer assembly **11** [Col. 4, Lines 23-24, Figure 1].

Regarding claim 14, Gehrmann discloses the outer annular profile **12** is connected in centering fashion with the converter receptacle **43** [see Figure 4].

Regarding claim 16, Gehrmann discloses the third annular profile **9** is centered in relation to the second annular profile **13**, which is adjacent to the first annular profile **12** by the cover **14** that closes the transformer chamber [Col. 4, Lines 21-27, Figure 1].

Regarding claim 17, Gehrmann discloses the fan **47** is situated such that it suctions cooling air via the annular chamber **50** adjacent to the first, outer annular profile **12**, and conducts this air to the outside via the annular chamber **50** enclosed by the transformer chamber [Col. 6, Lines 1-20, Figure 4].

Regarding claim 18, Gehrmann discloses a cooling area is closed in the axial direction on the one hand by the separating wall **15** of the converter receptacle **43** and on the other hand by a cover **14** that is provided with air passage openings [Col. 6, Lines 1-20, Figure 4]

Regarding claim 19, Gehrmann discloses the board chamber **26** is closed on the one hand by the separating wall **14** of the converter receptacle **43** and on the other hand by a front plate **44** [Col. 6, Lines 7-10, Figure 4].

Regarding claim 20, Gehrmann discloses a converter board **30** housed in the board chamber **26** is encapsulated in a power module and is exchangeable [Col. 6, Lines 5-15, Figure 4].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 8, 12, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gehrmann et al. [6441353] in view of Bruno [5019737].

Gehrmann discloses the instant claimed invention discussed above except for the third annular profile, in order to form a heat sink, is made up of an outer ring and an inner ring, cooling fins being situated in the area between the outer and inner ring that form a wall of one of the annular chambers acting as cooling air ducts.

Bruno discloses the third annular profile, in order to form a heat sink, is made up of an outer ring **1** and an inner ring **2**, cooling fins **3** being situated in the area between the outer and inner ring that form a wall of one of the annular chambers **9**, **10** acting as cooling air ducts [Col. 2, Lines 16-29, Figure 1].

It would have been obvious to one having ordinary skill in the art at the time of the invention to have a the third annular profile, in order to form a heat sink, is made up of an outer ring and an inner ring, cooling fins being situated in the area between the outer and inner ring that form a wall of one of the annular chambers acting as cooling air ducts as taught by Bruno to the third annular chamber of Gehrmann.

The motivation would have been to provide a plurality of flow channels for a substantially laminar flow of cooling air [Col. 1, Lines 58-60, Figure 1].

Regarding claim 8, Bruno discloses wherein a part of the cooling fins **3** connects the outer ring **1** and the inner ring **2** to one another, and between these cooling fins **3**, fins are situated on the outer ring that are freely protrude radially inward [see Figure 2].

Regarding claim 12, Bruno discloses the annular profiles are extruded profiles [Col. 2, Lines 49-50].

Regarding claim 13, Bruno discloses the extruded profiles are aluminum extruded profiles that have been cut to fit [Col. 2, Lines 49-51].

Regarding claim 15, Bruno discloses the converter receptacle made up essentially of an aluminum cast part [Col. 2, Lines 52-55].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joselito Baisa whose telephone number is (571) 272-7132. The examiner can normally be reached on M-F 5:30 am to 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joselito Baisa
Examiner
Art Unit 2832

jsb

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SUPERVISORY PATENT EXAMINER
07 NOV 06